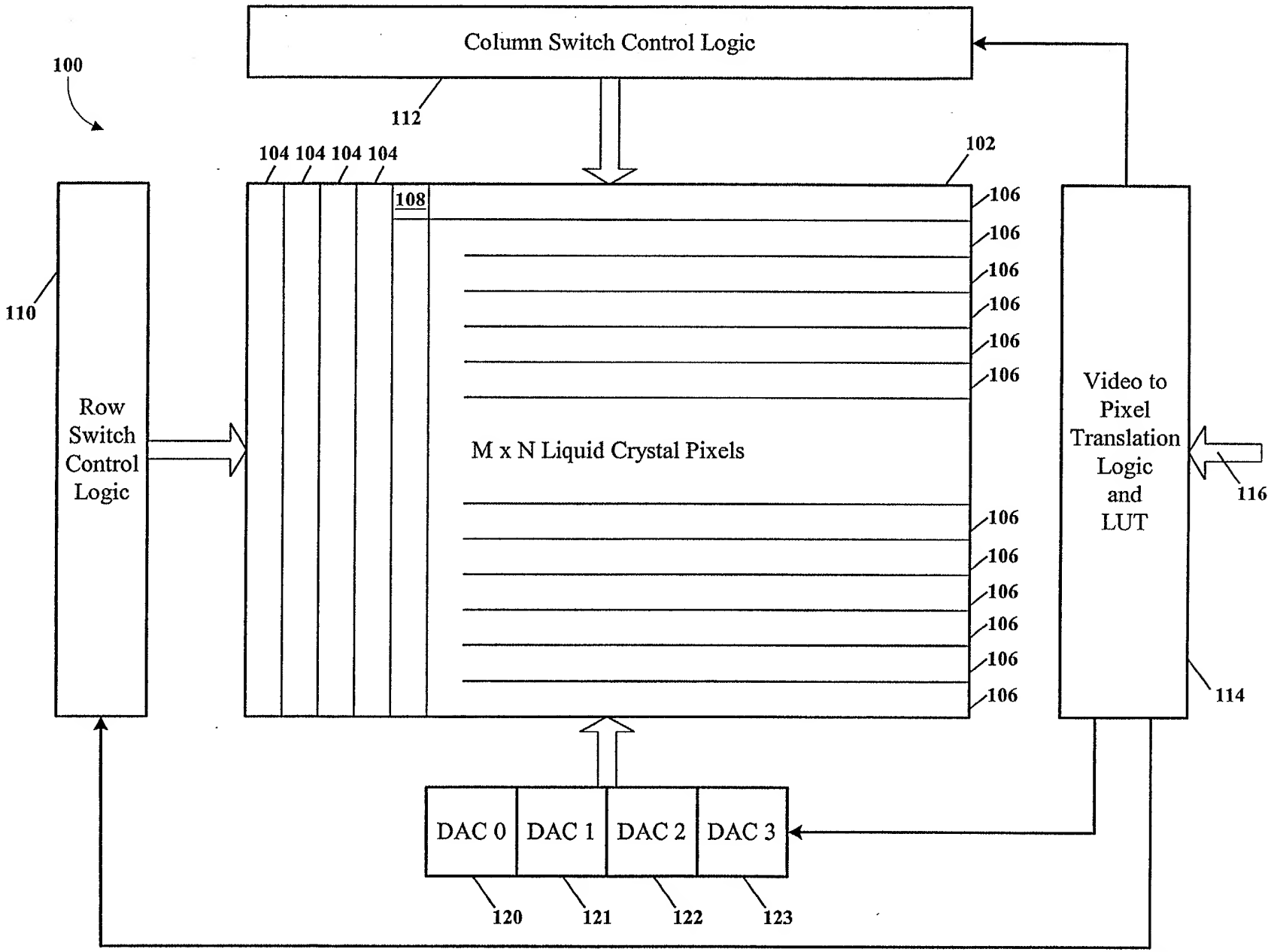
Column Switch Control Logic
100
112
104 104 104 104
102
108
106
106
106
106
106
106
110
Row Switch Control Logic
M x N Liquid Crystal Pixels
Video to Pixel Translation Logic and LUT
116
106
106
106
106
106
106
114
DAC 0
DAC 1
DAC 2
DAC 3
120
121
122
123

FIGURE 1

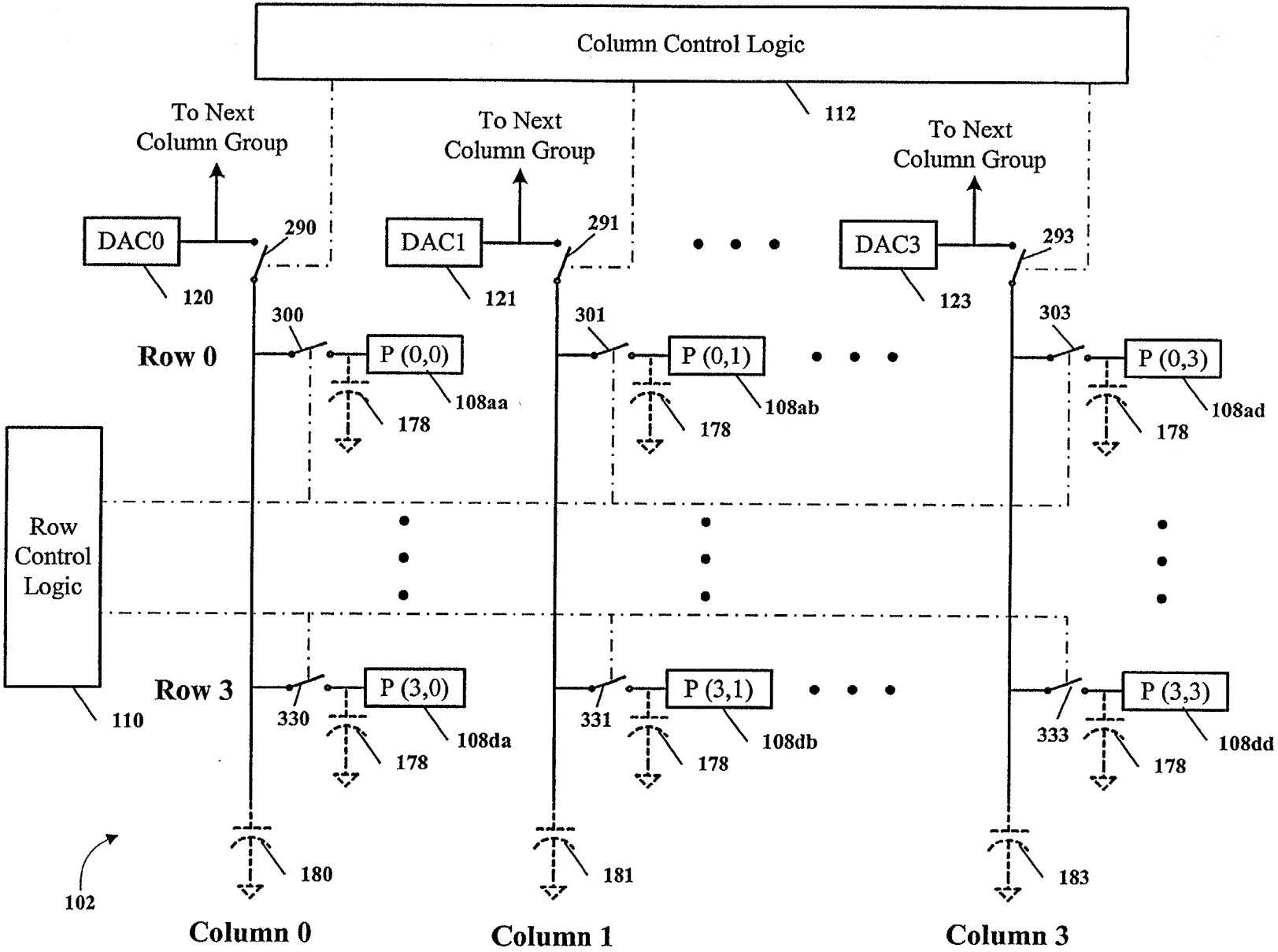

FIGURE 2

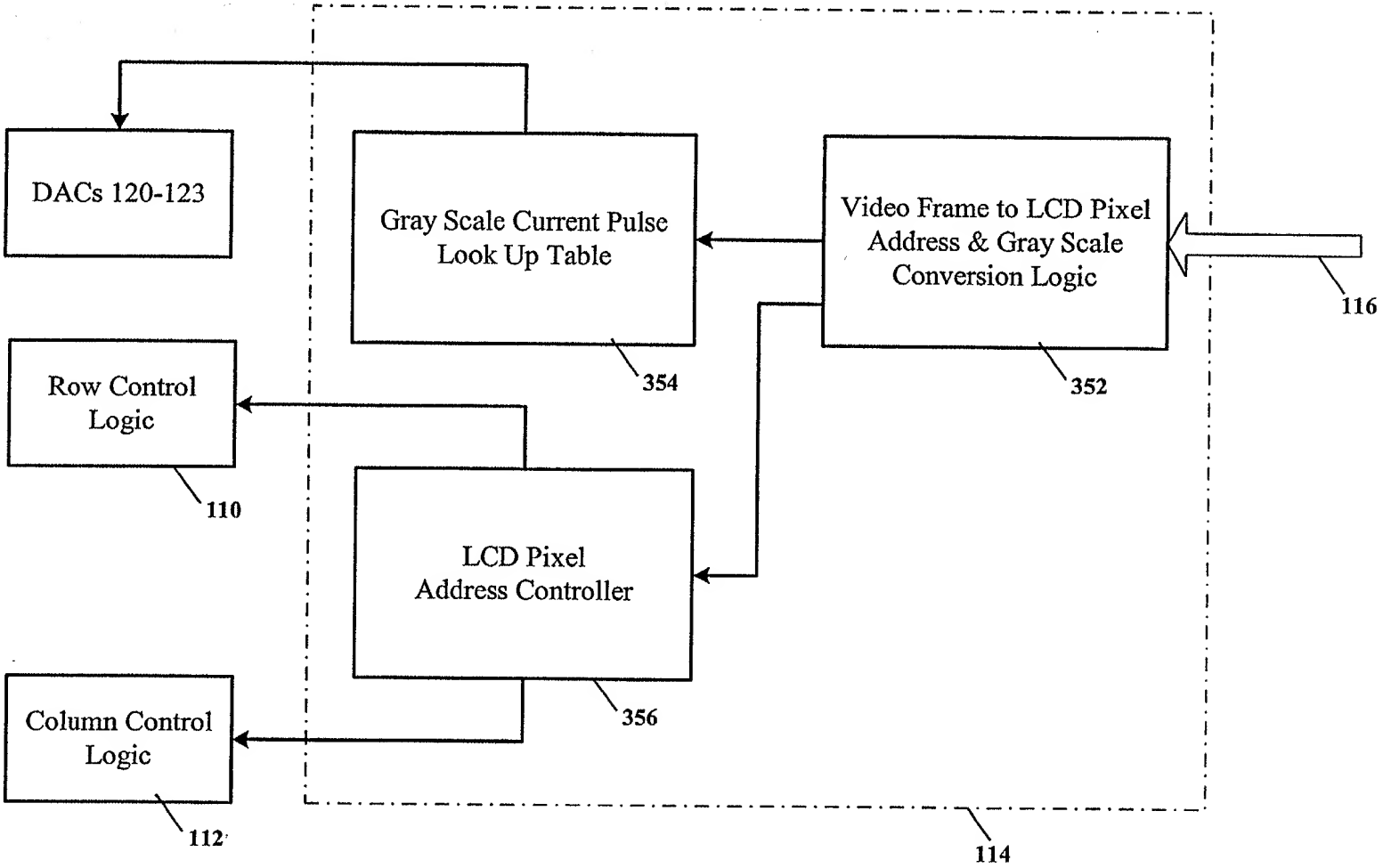
DACs 120-123
Gray Scale Current Pulse Look Up Table
354
Video Frame to LCD Pixel Address & Gray Scale Conversion Logic
352
116
Row Control Logic
110
LCD Pixel Address Controller
356
Column Control Logic
112
114

FIGURE 3

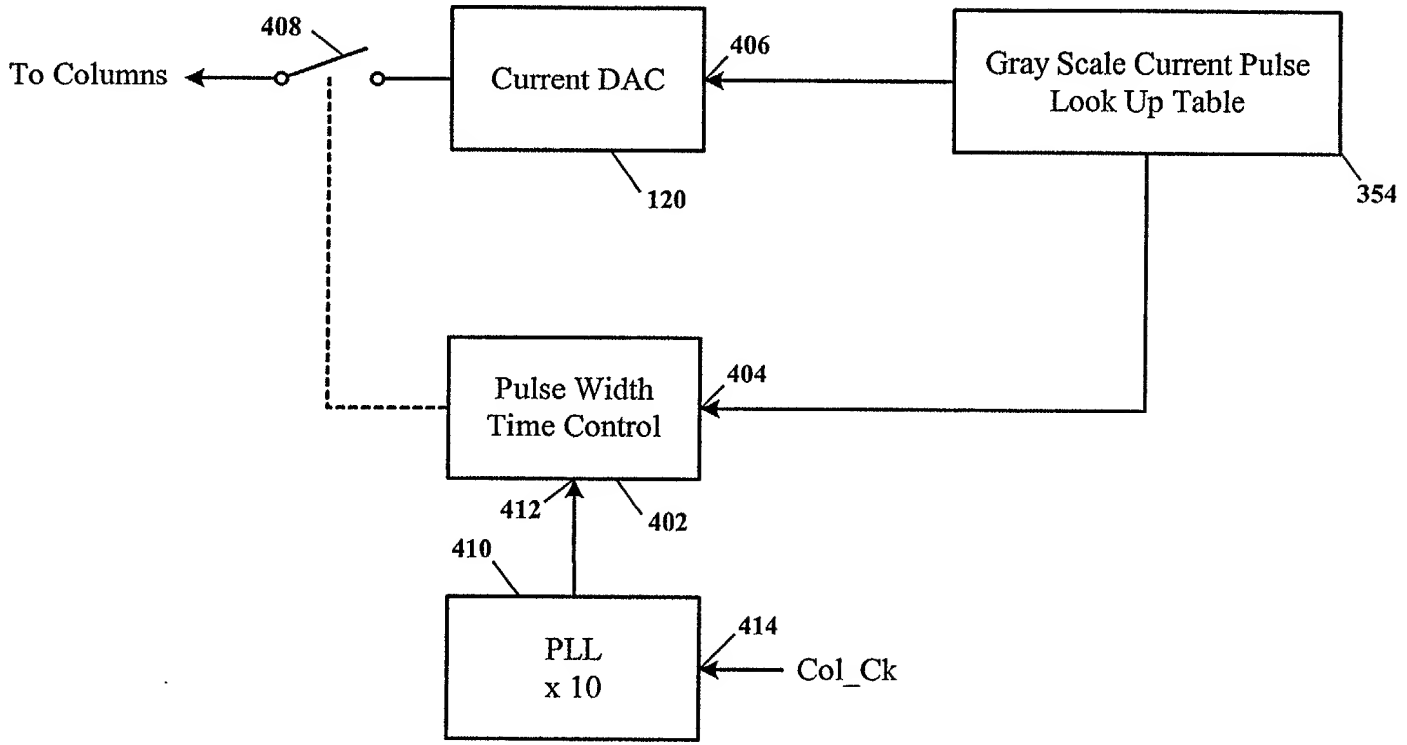
408
To Columns
Current DAC
406
Gray Scale Current Pulse
Look Up Table
120
354
Pulse Width
Time Control
404
412
402
410
PLL
x 10
414
Col_Ck

FIGURE 4

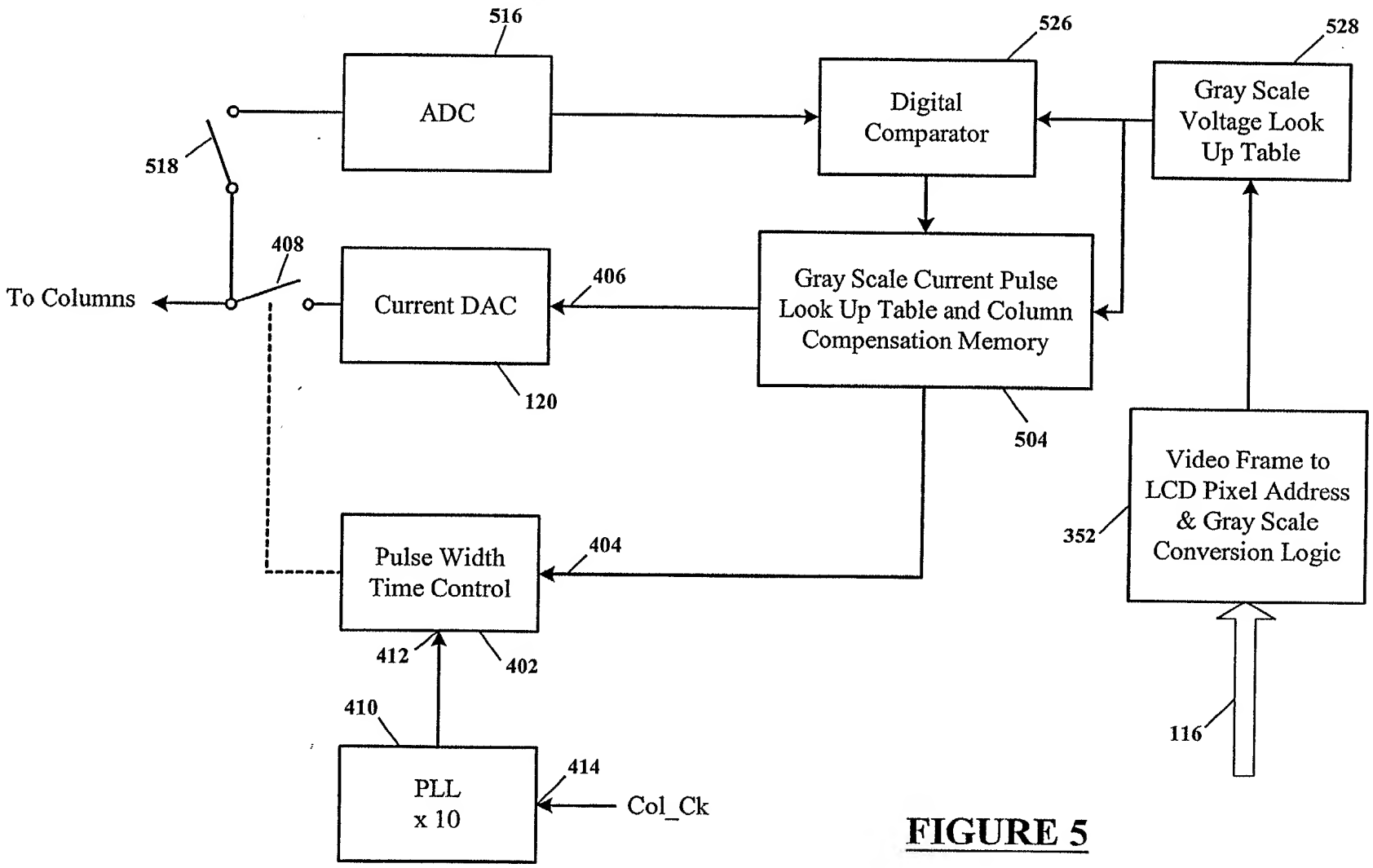
516
ADC
526
Digital Comparator
528
Gray Scale Voltage Look Up Table
518
408
To Columns
Current DAC
406
Gray Scale Current Pulse Look Up Table and Column Compensation Memory
120
504
Video Frame to LCD Pixel Address & Gray Scale Conversion Logic
352
Pulse Width Time Control
404
412
402
410
116
PLL x 10
414
Col_Ck

FIGURE 5

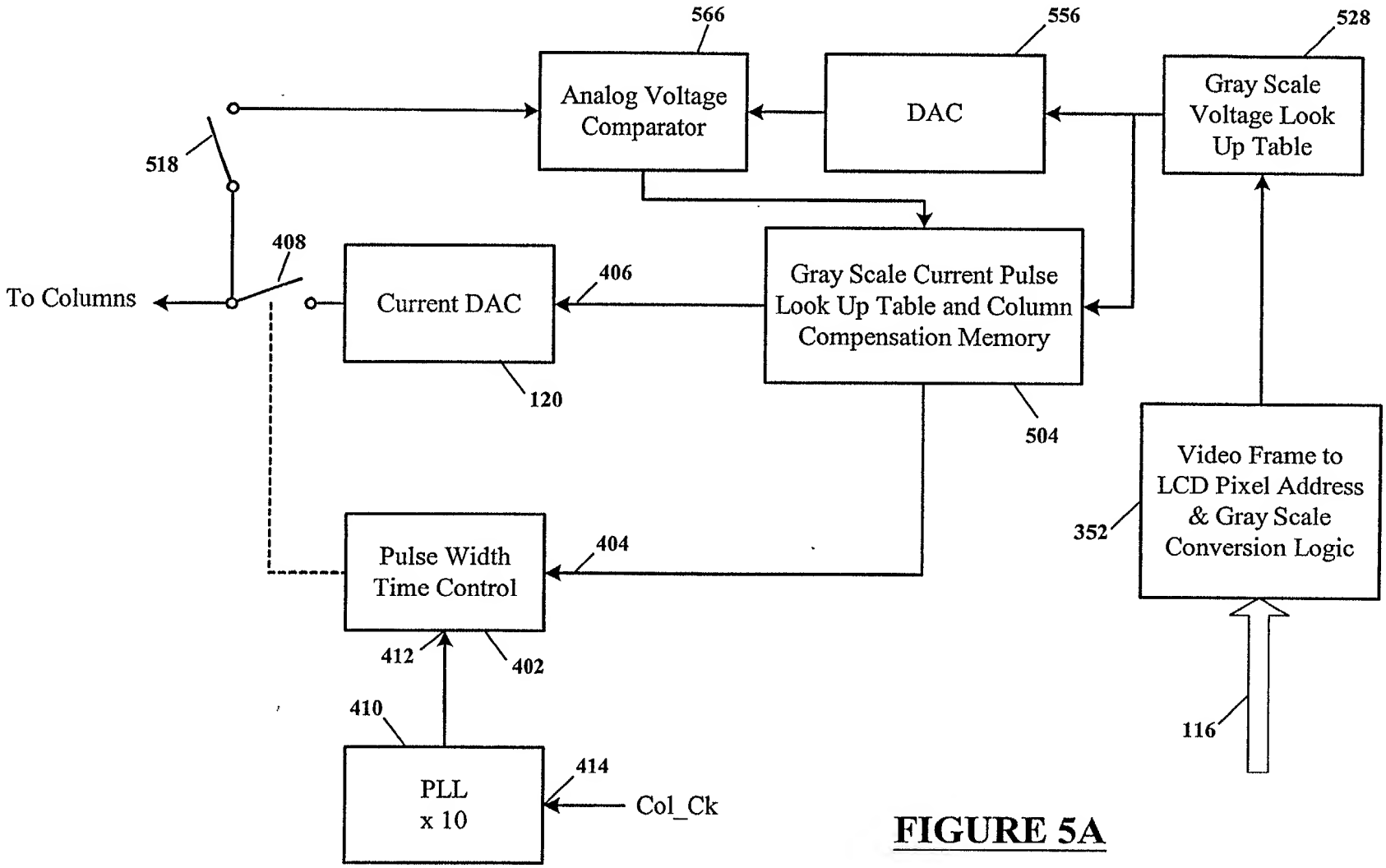
566
556
528
Analog Voltage Comparator
DAC
Gray Scale Voltage Look Up Table
518
408
To Columns
Current DAC
406
Gray Scale Current Pulse Look Up Table and Column Compensation Memory
120
504
Video Frame to LCD Pixel Address & Gray Scale Conversion Logic
352
Pulse Width Time Control
404
412
402
410
116
PLL x 10
414
Col_Ck

FIGURE 5A

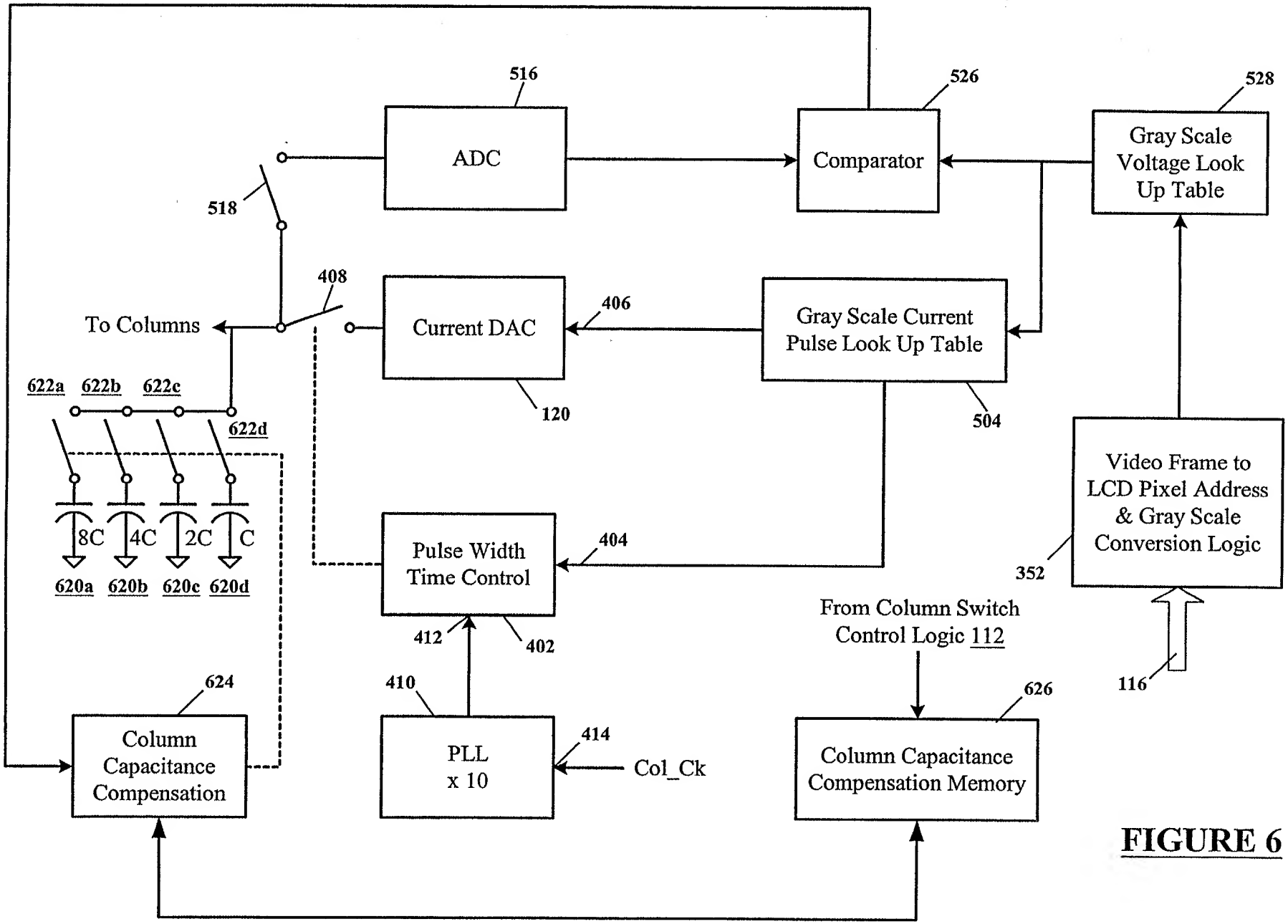
516
ADC
526
Comparator
528
Gray Scale Voltage Look Up Table
518
408
To Columns
Current DAC
406
Gray Scale Current Pulse Look Up Table
120
504
622a
622b
622c
622d
8C
4C
2C
C
620a
620b
620c
620d
Pulse Width Time Control
404
Video Frame to LCD Pixel Address & Gray Scale Conversion Logic
352
412
402
From Column Switch Control Logic 112
116
624
410
626
Column Capacitance Compensation
PLL x 10
414
Col_Ck
Column Capacitance Compensation Memory

FIGURE 6

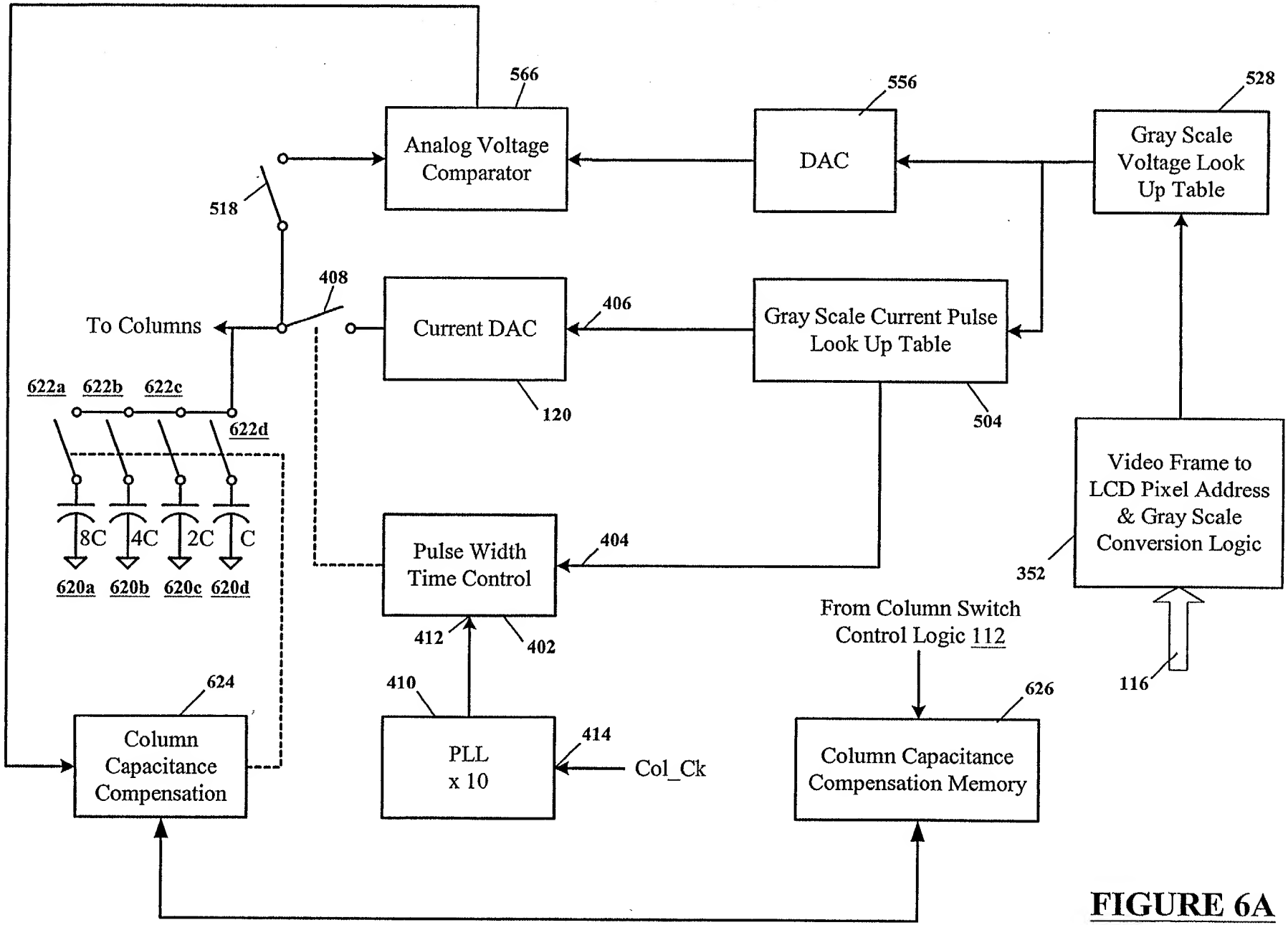
566
Analog Voltage Comparator
556
DAC
528
Gray Scale Voltage Look Up Table
518
408
To Columns
Current DAC
406
Gray Scale Current Pulse Look Up Table
120
504
622a
622b
622c
622d
8C
4C
2C
C
620a
620b
620c
620d
Pulse Width Time Control
404
Video Frame to LCD Pixel Address & Gray Scale Conversion Logic
352
From Column Switch Control Logic 112
412
402
116
624
410
626
Column Capacitance Compensation
PLL x 10
414
Col_Ck
Column Capacitance Compensation Memory

FIGURE 6A

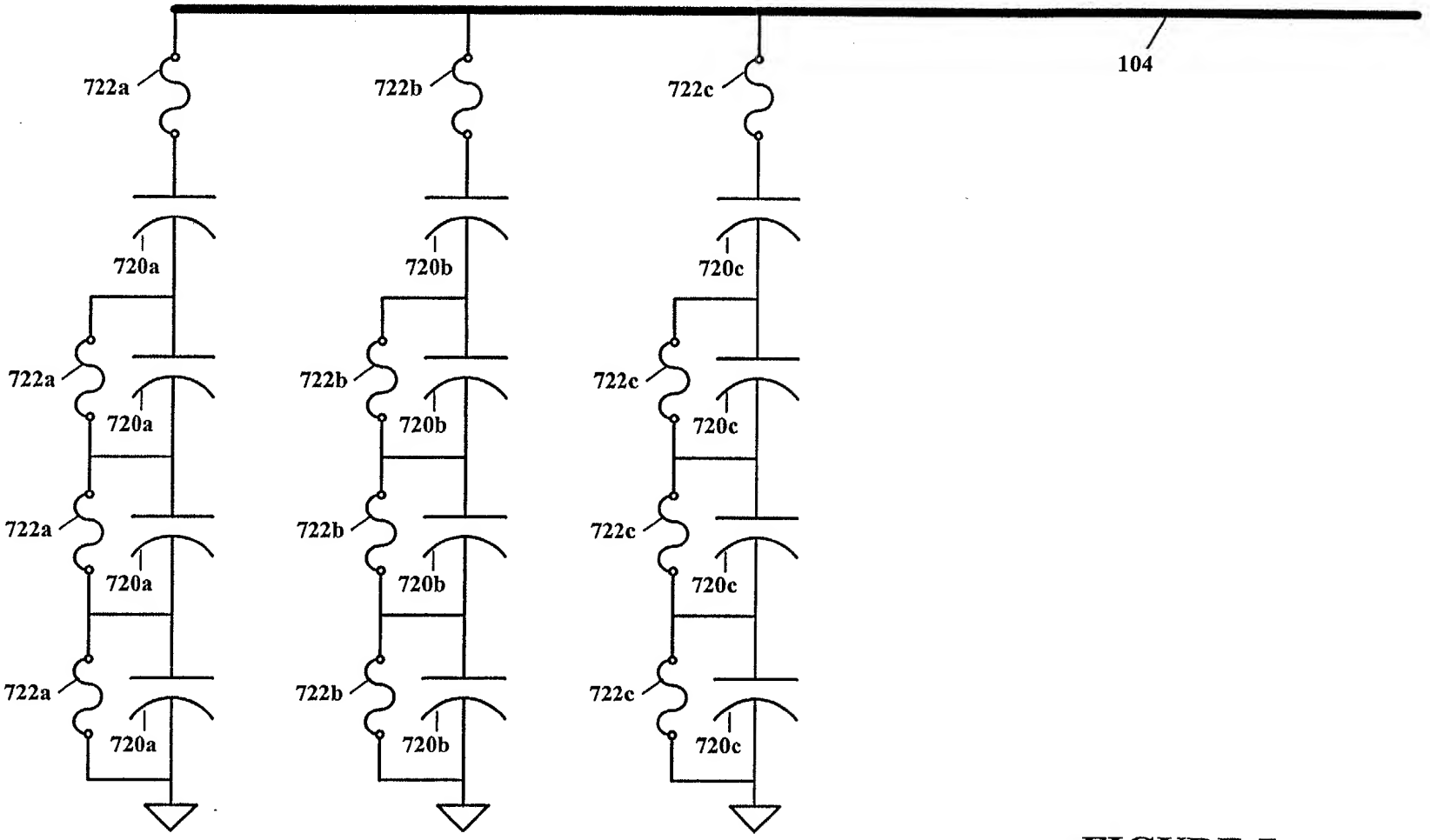

FIGURE 7